

CLAIMS

1. A video communication system comprising:
- (a) at least one analog video-signal source;
 - (b) at least one video display device;
 - (c) at least one control communication component configured
 - (i) to produce digital control-signals; and
 - (d) an unshielded twisted pair of wires
 - (i) defining a UTP communication path,
 - (ii) arranged for video-signal transportation,

wherein the system is configured to

- (i) multiplex
 - (1) analog video-signals,
 - a. originating at one of the video-signal sources,
 - (2) with digital control-signals;
 - a. from one of the control communication components
- (ii) transmit
 - (1) the multiplexed signals
 - (2) along the UTP communication path,
 - (3) to at least one of the video display devices, and
- (iii) use
 - (1) the control-signals
 - (2) to control reproduction of video images,
 - a. based on the video-signals,

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b. on one of the video display devices.

2. The video communication system of claim 1, further comprising

- (a) at least one analog audio-signal source; and
- (b) at least one audio reproduction device,

wherein the system is configured to

- (i) multiplex
 - (1) the analog video-signals
 - (2) with the digital control-signals, and
 - (3) with analog audio-signals
 - a. originating at one of the audio-signal sources;
- (ii) transmit
 - (1) these multiplexed signals
 - (2) along the UTP communication path; and
- (iii) reproduce audio
 - (1) based on the audio-signals
 - (2) at one of the audio reproduction devices.

3. The system of claim 2, further comprising:

- (a) at least one switch
 - (i) in communication with the UTP communication path,

wherein the system is configured to

- (i) control the switch
- (ii) to route
 - (1) the multiplexed signals

(2) along the UTP communication path.

Sub P2 4. The system of claim 3, further comprising:

- (a) at least one server
 - (i) configured to
 - (1) control the switch.

5. The system of claim 2, further comprising

- (a) at least two video display devices
 - (i) each having an associated processor
 - (ii) to each define a workstation, and
- wherein the system is configured
- (i) to control the reproduction of video images and spoken audio
 - (1) of a first workstation user
 - (2) at the workstation of a second workstation user.

6. The system of claim 5, wherein the system is configured to

- (a) reproduce the video images,
 - (i) at greater than 20 frames per second,
 - (ii) on at least one of the display devices.

Sub P2 7. The system of claim 6, wherein the system is configured

- (a) to combine video images
 - (i) of at least a first and a second user
 - (ii) into a mosaic image, and

- (b) to reproduce the mosaic image
(i) on one of the video display devices.

8. The system of claim 6, wherein the system is configured:

- (a) to allow a first user
(i) to use a first graphical user interface
(ii) to select a user
(iii) from a plurality of users; and
(b) to allow the first user
(i) to use a second graphical user interface
(ii) to select a collaboration type
(iii) from a group of collaboration types; and
(c) to respond
(i) by establishing communication
(ii) of the selected collaboration type
(iii) between the first user and
(iv) the selected user.
(v) the selected user.

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The system of claim 2, comprising:

- (a) at least one processor
(i) capable of providing data conferencing signals;

wherein the system is configured to

- (ii) display information,
(1) based on the data conferencing signals,

(2) on one of the display devices.

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The system of claim 8, wherein

- (a) images
 - (i) based on the video signals
 - (ii) can be displayed
 - (iii) in a first window on the display device, and
- (b) information
 - (i) based on the data conferencing signals
 - (ii) can be displayed
 - (iii) in a second window on the display device.

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The system of claim 8, wherein

- (a) the information
 - (i) based on the data conferencing signals
 - (ii) is displayed
 - (iii) interactively
 - (iv) on at least two of the display devices.

12.

A method of conducting a teleconference using a system including

at least one video display device, and
at least one video signal source

the method comprising the steps of:

- (a) generating analog video-signals,
 - (i) at one of the video-signal sources;
- (b) producing digital control-signals;

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- (c) multiplexing
 - (i) the analog video-signals
 - (ii) with the control-signals
 - (iii) onto at least one unshielded twisted pair of wires;
 - (1) defining a UTP communication path
 - (d) transmitting the multiplexed signals
 - (i) along the UTP communication path; and
 - (e) using the control-signals to
 - (i) control the reproduction of video images,
 - (1) based on the transmitted video-signals,
 - (2) on one of the video display devices.

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The method of claim 12, wherein the system includes
at least one audio source and
at least one audio reproduction device,
the method further comprising the steps of:

- (a) transporting audio signals,
 - (i) originating at one of the audio sources;
 - (ii) over the UTP communication path; and
- (b) reproducing audio
 - (i) based on the transported audio signals
 - (ii) at one of the audio reproduction device.

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The method of claim 13, further comprising the step of:
(a) switching the signals

- (i) over the UTP communication path.

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15. The method of claim 13, wherein the system includes

- (a) at least two of the video display devices
- (i) each having an associated processor
- (ii) to each define a workstation.

the method further comprising the step of

- (i) displaying images at a workstation.

16. The method of claim 15, wherein

- (a) the video images are reproduced
- (i) at greater than 20 frames per second,
- (ii) at a workstation.

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17. The method of claim 15, further comprising the steps of:

- (a) combining video images
- (i) of at least a first and a second user
- (ii) into a mosaic image, and
- (b) reproducing the mosaic image
- (i) on at least one of the video display devices.

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18. The method of claim 15, further comprising the steps of:

- (a) allowing a first user
- (i) to use a first graphical user interface
- (ii) to select a user

- (iii) from a plurality of users;
- (b) allowing the first user
- (i) to use a second graphical user interface
 - (ii) to select a collaboration type
 - (iii) from a group of collaboration types; and
- (c) responding
- (i) by establishing communication
 - (ii) of the selected collaboration type
 - (iii) from the first user to
 - (iv) the selected user.

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The method of claim ~~18~~¹⁴, further comprising the steps of:

- (a) generating data conferencing signals;
- (b) transmitting the data conferencing signals
 - (i) over at least one data communication path
- (c) displaying information,
 - (i) based on the transmitted data conferencing signals,
 - (ii) on at least one of the video display devices.

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The method of claim ~~19~~¹⁷, further comprising the steps of:

- (a) reproducing images
 - (i) based on the video signals
 - (ii) in a first window on the display device, and
- (b) displaying information
 - (i) based on the data conference signals

- (ii) in a second window on the display device.

21. A video communication system

for operation with an infrastructure including

at least one analog video-signal source;

at least one video display device; and

an unshielded twisted pair of wires

defining a UTP communication path

arranged for video signal transportation,

the system comprising:

- (a) at least one control communication component configured to,
produce digital control-signals; and

wherein the system is configured to

- (i) multiplex

- (1) analog video-signals,

- a. originating at a video-signal source,

- (2) with digital control-signals

- a. from one of the control communication components,

- (ii) transmit the multiplexed signals

- (1) along the UTP communication path;

- (2) to at least one of the video display devices; and

- (iii) use the control-signals to

- (1) control reproduction of video images,

- a. based on the video-signals,

- b. one of the video display devices.

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The video communication system of claim 21, wherein the infrastructure further includes
at least one analog audio-signal source; and
at least one audio reproduction device, and
wherein the system is configured to

- (i) multiplex
 - (1) the analog video-signals
 - (2) with the digital control signals, and
 - (3) with analog audio-signals
 - a. originating at one of the audio-signal sources;
- (ii) transmit
 - (1) these multiplexed signals
 - (2) along the UTP communication path; and
- (iii) reproduce audio
 - (1) based on the audio-signals
 - (2) at one of the audio reproduction devices.

Sub P 23.

The system of claim 22,

- (a) wherein the control components are further configured to control
 - (i) a switch
 - (ii) to route the multiplexed signals
 - (1) along the UTP communication path.

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The system of claim 23, wherein the system further comprises:

- (a) at least one server
 - (i) configured to

- (1) control the switch.

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25. The system of claim 22, wherein the infrastructure further includes:

- (a) at least two video display devices
- (i) each having an associated processor
- (ii) to each define a workstation, and

wherein the system is configured

- (i) to control the reproduction of video images and spoken audio
- (1) of a first workstation user
- (2) at the workstation of a second workstation user.

26. The system of claim 25, wherein the system is configured to

- (a) reproduce the video images,
- (i) at greater than 20 frames per second,
- (ii) on at least one of the display devices.

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27. The system of claim 26, wherein the system is configured

- (a) to combine video images
- (i) of at least a first and a second user
- (ii) into a mosaic image, and
- (b) to reproduce the mosaic image
- (i) on at least one of the video display devices.

28. The system of claim 26, wherein the system is configured:

- (a) to allow a first user

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- (i) to use a first graphical user interface
 - (ii) to select a user
 - (iii) from a plurality of users; and
 - (b) to allow the first user
 - (i) to use a second graphical user interface
 - (ii) to select a collaboration type
 - (iii) from a group of collaboration types; and
 - (c) to respond
 - (i) by establishing communication
 - (ii) of the selected collaboration type
 - (iii) between the first user and
 - (iv) the selected user.
 - (v) the selected user.

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29. The system of claim 24, wherein the system is configured:

- (a) to transport data conferencing signals
 - (1) originating at a processor,
 - (2) to at least one of the display devices,
- (b) display video images,
 - (1) based on the carried video signals,
 - (2) on the display device, and
- (c) display information,
 - (1) based on the carried data conferencing signals,
 - (2) on the display device.

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The system of claim ~~29~~²⁴, wherein:

- (a) images
 - (i) based on the video signals
 - (ii) can be displayed
 - (iii) in a first window on the display device, and
- (b) information
 - (i) based on the data conference signals
 - (ii) can be displayed
 - (iii) in a second window on the display device.

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The system of claim ~~29~~²⁶, wherein

- (a) the information
 - (i) based on the data conferencing signals
 - (ii) is displayed
 - (iii) interactively
 - (iv) on at least two of the display devices.

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